REMARKS

Applicants amend claims 1, 14, and 24. Claim 26 is canceled without prejudice. As discussed in more detail below, support for the amendments can be found in the specification, e.g., page 3 and page 81. Thus, no new matter is added. The various grounds of rejection are discussed below.

Restriction of claim 26

Claim 26 is canceled without prejudice. Applicants reserve the right to pursue this claim in future continuing applications.

Rejections under 35 U.S.C. § 103

The Office Action rejects claims 1 and 14 as being obvious over Stevenson et al. in view of what the Examiner characterizes as Applicant's admitted prior art.

Claim 1, as amended, recites a method of managing distributed statistical data retrieval in a network device. The method comprises gathering statistical data on at least one card within the network device periodically (step a), sending a predetermined number of packets from the card to a central process, wherein each packet includes at least a portion of the statistical data (step b), sending an acknowledge request to the central process in conjunction with sending the last packet in the predetermined number (step c), and controlling the number of packets sent from the card to the central process (step d). An acknowledge packet is sent from the central process to the card indicating a time that the card can resume sending packets to the central process. The claim is amended to specify that this time is *based on an estimate of a time interval needed by the central process to process a sufficient number of the received packets to reduce the number of packets awaiting processing below a predetermined threshold.* Steps b, c and d are repeated when the acknowledge packet is received at the card.

Support for the amendment to claim 1 can be found, among other places, on page 81 of the specification. Thus, no new matter is added.

Stevenson discloses a protocol, known as Burst Mode Protocol, for transferring data between a client and a server.   Although the server replies to the client with an acknowledgement of success or a missing fragment list, it does not include in that acknowledgement a time at which the client can resume sending packets. More specifically, it does not include in that acknowledgement such a time based on an estimated time interval needed by the server to process sufficient packets to reduce the number of packets awaiting processing below a threshold. While the receipt of an acknowledgement of success allows the client to begin sending additional packets to the server, no specific time is provided to the client at which it can resume such transmission. For example, the client can resume data transmission as soon as it receives an acknowledgement of success even if a large number of previously-sent packets still await processing by the server.

This distinction results in significant functional differences between the method of claim 1 and the Burst Mode Protocol disclosed by Stevenson. In particular, in Stevenson, the client can resume data transmission even if the server's capacity for processing packets is severely stressed, whereas in the claimed method, the central process can cause an adjustable delay in data transmission from the card based on the number of packets that await processing by the central process.

Further, Applicants' discussions, in the background of the application, regarding problems associated with retrieving data from distributed modules in a network device in no way indicate any solutions for these problems. Nor do they provide any suggestion for modifying a Burst Mode Protocol to overcome these problems.

Accordingly, claim 1 and claims 2-4 and 7-13, which depend either directly or indirectly on claim 1, are patentable.

The arguments presented above with respect to claim 1 apply with equal force to establish that claim 14, as amended, is also patentable. More specifically, amended claim 14 recites that controlling the number of packets sent from the cards to the central process includes sending an acknowledge packet from the central process to each card indicating a time at which the card can resume sending packets to the central process, wherein this time is based on an estimate of a time interval needed by the central process to process a sufficient number of the

received packets to reduce the number of packets awaiting processing below a predetermined threshold – a feature not taught by Stevenson as discussed above.

Thus, claim 14 and claims 15-23, which depend either directly or indirectly on claim 14, are also patentable.

The Office Action rejects claim 5 as being obvious over Stevenson in view of what the Examiner characterizes as Applicant's admitted prior art and further in view of Tanenbaum.

Claim 5 recites a method of managing distributed statistical data retrieval in a network device. The method comprises gathering statistical data on at least one card within the network device periodically (step a), sending a predetermined number of packets from the card to a central process, wherein each packet includes at least a portion of the statistical data (step b), sending an acknowledge request to the central process in conjunction with sending the last packet in the predetermined number (step c), and controlling the number of packets sent from the card to the central process (step d). Controlling the number of packets includes sending an acknowledge packet from the central process to the card and repeating steps b, c and d when the acknowledge packet is received at the card. Sending the acknowledge packet from the central process to the card comprises detecting an acknowledge request at the central process in a packet received from the card and determining a number of packets to be processed by the central process. The number of packets to be processed is compared to a predetermined threshold periodically. The acknowledge packet is sent to the card from the central process when the number of packets to be processed is less than the predetermined threshold.

Stevenson does not teach sending an acknowledge packet from the server to the client when the number of packets to be processed by the server is less than a predetermined threshold. Further, Tanenbaum, the secondary reference, does not remedy the deficiencies of Stevenson. Tanenbaum describes a conventional stop-and-wait protocol for controlling packet traffic from a sender to a receiver, in which the sender must wait for an acknowledgement from the receiver indicating that the receiver is ready to accept another packet. More specifically, the passage in Tanenbaum to which the Examiner refers indicates that a receiver, after having sent a received packet to its network layer, sends a dummy frame back to the sender to give the sender permission to transmit a subsequent frame.

There is, however, no indication in that passage that the receiver would determine the number of packets to be processed by its central process, periodically compare that number with a predetermined threshold and send an acknowledgement packet to the sender when the number of packets to be processed is less than the predetermined threshold. Rather, the receiver sends the dummy frame after having sent a previously received frame to its network layer. In other words, the above passage of Tanenebaum, and more generally the stop-and-wait protocol, do not provide the salient features of claim 5.

Hence, claim 5 is patentable over combined teachings of the cited references.

In Paragraph 22, the Office Action rejects claim 6 as being obvious over Stevenson in view of Applicant's admitted prior art in further view of U.S. Patent No. 6,167,054 of Simmons.

Claim 6 depends on claim 1, and hence incorporate the features of claim 1. As discussed above, Stevenson fails to teach the salient features of claim 1 and, consequently, those of claim 6. Further, Simmons does not cure the shortcomings of Stevenson. Rather, Simmons describes a flow control method for managing transmission of data frames from a transmitting station to a destination station via one or more switches. In Simmons' method, a switch can transmit a PAUSE signal to the transmitting station to stop transmission for a selected period. It, however, fails to teach controlling the number of packets sent from a sender to a receiver in the manner recited in claim 1 (i.e., via an acknowledgement packet indicating a time for resumption of data transmission). Nor does it teach the additional steps recited in claim 6: detecting an acknowledge request at the central process in a packet received from the card, determining a number of packets to be processed by the central process, comparing the number of packets to be processed to a predetermined threshold, and estimating when the number of packets to be processed will be below the predetermined threshold.

The Office Action rejects claims 24 and 25 as being obvious over Stevenson in view of what the Examiner characterizes as Applicant's admitted prior art in further view of Tanenbaum, as presented in the previous Office Action dated April 8, 2004.

Claim 24, as amended, recites a method of managing distributed statistical data retrieval in a network device. The method comprises gathering a plurality of different types of statistical

data on at least one card within the network device periodically, and sending groups of packets from the card to a central process at staggered times. Each group of packets includes one of different types of statistical data. The claim is amended to specify that the staggered times are determined by a plurality of polling timers, each corresponding to one of the statistical data types.
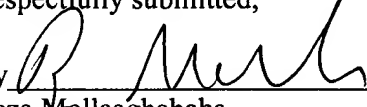
None of the references, either separately or in combination, teach the features of claim 24. In particular, the combined teachings of the cited references fail to teach sending packets containing different types of statistical data to a central process at staggered times, where the staggered times are determined by a plurality of polling timers, each of which corresponds to one of the statistical data types. Thus, claim 24 and claim 25, which depends on claim 24, are patentable over the combined references.

Conclusion

In view of the above amendments and remarks, Applicants request reconsideration and allowance of the application. The Examiner is invited to call the undersigned at (617) 439-2514 if there are any remaining issues.

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Respectfully submitted,

By_____
Reza Mollaaghababa
Registration No.: 43,810
NUTTER MCCLENNEN & FISH LLP
World Trade Center West
155 Seaport Boulevard
Boston, Massachusetts 02210-2604
(617) 439-2000
(617) 310-9000 (Fax)
Attorney for Applicant

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